

REMARKS/ARGUMENTS

Claims 1-16 are pending in the application. Claims 1-3 and 16 stand rejected as unpatentable over Ziv (U.S. Pat. No. 6,292,662) in view of Chung (U.S. Pat. No. 5,706,282); and the Examiner considers that claims 4-15 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

The Examiner's statement that claims 4-15 would be allowable if rewritten to include all the limitations of the base claim and any intervening claims is noted and appreciated. However, it is believed that claims 1-3 and 16 likewise clearly distinguish over the references applied by the Examiner, as well as the references cited but not applied by the Examiner.

Reasons for Allowance

The Examiner's additional reference to allowance of claims 5-9 in an Office Action mailed 6-28-04 does not appear to bear any relationship to the present application and is presumably an error.

Claim Rejections - 35 U.S.C. § 103

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as obvious over Ziv in view of Chung. Independent claim 1 proposes a procedure to improve the audio quality in a mobile radio network that involves (a) a tone control in the audio path, (b) the tone control influences the audio quality dependent on the types of end device(s), and (c) the tone control influences the audio quality by changing a frequency response of a sound in the audio path. Independent claim 16 further proposes a procedure to improve the audio quality in a mobile radio network involving (i) an equalizer in the audio path, (ii) the equalizer influences the audio quality dependent upon the types of end device(s), and (iii) the equalizer influences the audio quality in the audio path by changing a sound in the audio path.

In the outstanding Office Action, the Examiner considers that Ziv teaches each and every element of claims 1 and 16 except "influences the audio quality in the audio path in that a frequency response of a sound in the audio path is changed", which the Examiner

considers to be taught by Chung. The rejection is respectfully traversed and reconsideration is requested. It is respectfully submitted that Ziv and/or Chung do not disclose the Applicant's claimed invention either separately or in combination with one another.

As is well known in the art, vocoding digital audio data uses a compression algorithm that eliminates some of the data in a way that allows generation of a comprehensible but inherently degraded version of the data, and double vocoding of the data eliminates still more of the data resulting in still further degradation of the data. Ziv merely proposes routing cell phone-to-cell phone calls entirely within the same wireless system or using a dedicated switching connection (i.e. an ATM packet network) between wireless systems, to omit such double vocoding as a source of signal degradation. See, e.g., Ziv, Col 2, line 45-Col 5, line 26.

Ziv fails to teach or suggest a tone control switched into the audio path that influences the audio quality dependent on the types of end device(s) by changing a frequency response of a sound in the audio path, as recited in independent claim 1, or an equalizer switched into the audio path that influences the audio quality dependent upon the types of end device(s) by changing a sound in the audio path, as recited in independent claim 16. On the contrary, Ziv merely attempts to omit a source of audio signal degradation by using a routing method within the same wireless network or by a dedicated switching connection between two wireless networks that omits double vocoding. See e.g., Ziv, Col 1, line 30-Col 3, line 2.

Chung fails to remedy the deficiencies of Ziv. On the contrary, Chung teaches asymmetric speech coding for a digital cellular communications system. According to Chung, a higher rate speech coder, i.e., a speech coder that outputs a higher bit rate, is provided on the uplink. This higher coding bit rate for the uplink results in an increase in the quality of the uplink audio, i.e., the overall bandwidth of the communication channel is increased. The downlink coding rate is not increased, resulting in asymmetric speech coding. See, e.g., Chung, Col 2, line 13-Col 3, line 25.

Chung fails to disclose a tone control that is switched in the audio paths and which dependent on the types of end device(s) or equipment being used in the connection, influences and changes a frequency response of a sound in the audio path. According to Chung the overall bandwidth of the communication channel is increased. In contrast thereto, the present application teaches a change in the frequency response of the audio signal without changing the bandwidth.

Instead of a tone control switched into the audio path that influences the audio quality dependent on the types of end device(s) by changing a frequency response of a sound in the audio path, as recited in independent claim 1, or an equalizer switched into the audio path that influences the audio quality dependent upon the types of end device(s) by changing a sound in the audio path, as recited in independent claim 16, Chung merely attempts to partially omit audio data degradation caused by interference from other users in the same channel by increasing the speech coder rate (resulting in increased available bandwidth) on the uplink channel. See, e.g., Chung, Col 3, line 50-Col 4, line 64.

Consequently, Ziv, which proposes a dedicated switching connection between wireless networks to omit double vocoding (and resulting signal degradation) and/or Chung, which teaches increasing the speech coder rate on the uplink to partially omit interference (and resulting signal degradation), either separately or in combination with one another, fail to disclose or suggest the required combination of limitations of a tone control switched in the audio path that influences the audio quality dependent on the types of end device(s) by changing a frequency response of a sound in the audio path, as recited in independent claim 1, or an equalizer switched in the audio path that influences the audio quality dependent upon the types of end device(s) by changing a sound in the audio path, as recited in independent claim 16.

Because the cited references, either alone or in combination, do not teach the limitations of independent claims 1 and 16, the Examiner has failed to establish the required *prima facie* case of unpatentability. See In re Royka, 490 F.2d 981, 985 (C.C.P.A., 1974) (holding that a *prima facie* case of obviousness requires the references to teach all of the

limitations of the rejected claim); See also MPEP §2143.03. The Examiner has failed to establish the required *prima facie* case of unpatentability for independent claims 1 and 16 and similarly has failed to establish a *prima facie* case of unpatentability for claims 2 and 3 that depend on claim 1 and which recite further specific elements that have no reasonable correspondence with the references.

Conclusion

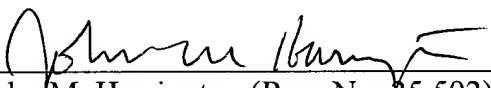
In view of the foregoing amendment and these remarks, each of the claims remaining in the application is in condition for immediate allowance. Accordingly, the examiner is requested to reconsider and withdraw the rejection and to pass the application to issue.

The examiner is respectfully invited to telephone the undersigned at (336) 607-7318 to discuss any questions relating to the application.

Respectfully submitted,

Date:

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